

Evaluation of drag and added mass forces acting on vibrating cantilever beams in the air

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Abstract

© The Authors, published by EDP Sciences, 2018. In the paper a method for determining of the aerodynamic influence on oscillating cantilever beams based on gyroscope measurements is presented. The developed method allow to establish the global influence of the aerodynamic effects on oscillation process and the local force characteristics in each cross-section of the beam. The obtained estimates of drag and added mass forces acting on the beams show a good agreement with the known numerical and experimental data.

<http://dx.doi.org/10.1051/mateconf/201821111004>

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